IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of

GILLIAN ANTOINETTE MIMNAGH-KELLEHER ET AL.

Atty. Docket: NL 021259

Confirmation No. 8406

Serial No. 10/537,877

Group Art Unit: 2856

Filed: JUNE 7, 2005

Examiner: SHAH, SAMIR M.

Title: ACTIVITY MONITORING

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<u>APPELLANTS' REPLY BRIEF</u>

Sir:

In response to the Examiner's Answers mailed on March 19,

2008, please consider the following remarks:

REMARKS

Appellants maintain the arguments submitted in the Appeal

Brief filed on February 15, 2008, the Supplemental Brief filed on

March 3, 2008, and the Supplemental Brief filed on February 16,

2009, which are incorporated herein by reference. Further,

Appellants refute the allegations made in the Examiner's Answer of

March 19, 2009.

For example, on page 11, lines 11-15 of the Examiner's Answer

of March 19, 2009, it is alleged that:

> the Appellant's interpretation of, "taking a
> magnitude of the resultant values" as
> calculating/determining a magnitude of the resultant
> values appears to be incorrect. The Examiner
> interprets, "taking a magnitude" as using/reading a
> magnitude from the look-up table and not as
> calculating/determining a magnitude. (Emphasis added)

It is respectfully submitted that the Examiner's

interpretation of "taking a magnitude" (recited on column 7, line

28 of Nikolic) as using/reading a magnitude from the look-up table

and not as calculating/determining a magnitude," is misplaced, and

can only be arrived to using impermissible hindsight.

It is respectfully submitted that one skilled in the art can

only arrive to a single conclusion from column 7, lines 22-31 of

Nikolic, which is the ONLY place a look-up table is mentioned in

Nikolic, where column 7, lines 12-31 specifically recite:

> Referring now to FIG. 3, a flow chart is provided to illustrate an embodiment of the overall system logic of monitoring device 200. <u>In step 305</u>, the <u>output of the accelerometer</u> or activity monitor is <u>obtained</u>. The acceleration output information can be read as an analog voltage, or can be read digitally using a Pulse Width Modulated (PWM) output. In the embodiment of FIG. 3, the acceleration output information is read as an analog voltage and <u>includes</u> <u>acceleration information from two orthogonal axes</u>.
>
> In step 310 the acceleration output or data for each axis is added to a cumulative sum for the corresponding axis. The acceleration data is <u>compared</u> <u>to the minimum and maximum values</u> of the information <u>obtained in step 305</u>. <u>If</u> the data point is a <u>new</u> <u>minimum or maximum</u>, the data point is <u>saved</u> on storage device 250 of FIG. 2. By way of example, this can be done by employing a look-up table in ROM and **taking** **the magnitude** <u>of the resultant values</u>, or alternatively by designating one axis to determine the maximum and minimum data points. (Emphasis added)

Based on the above portion of Nikolic, as well as the

remainder of Nikolic, one skilled in the art would understand that,

in step 305, acceleration output information are obtained that

include acceleration information from two orthogonal axes. From

the obtained acceleration output information, minimum and maximum

values are saved in the on storage device 250. It is <u>these minimum</u>

<u>and maximum values that are determined "by employing a look-up</u>

<u>table</u> in ROM and taking the magnitude of the resultant values."
(Column 7, lines 28-29; emphasis added) That is, the look-up table
is used to obtain the minimum and maximum values. Once the minimum
or maximum values are determined (using the look-up table), then
the <u>magnitude</u> of the resultant values of the <u>minimum or maximum</u>
values are <u>taken</u>.

The look-up table includes raw data from the accelerometer in
two orthogonal axes. This raw data is in ONE form, either in
vector form or in magnitude form. Assuming, arguendo, that the raw
accelerometer data is in magnitude form, and is simply read from
the look-up table, there is still no disclosure or suggestion in
Nikolic of a look-up table of "stored <u>magnitudes</u> **and** associated
<u>vector</u> components," as recited in independent claim 26 and 31.
Rather, at best, the Nikolic look-up table stores either magnitudes
or vector component values for the minimum or maximum magnitudes **or**
the minimum or maximum vector component values.

Processing sensor signals as vector components of a vector to
produce a magnitude of the vector using a lookup table of stored
<u>magnitudes</u> **and** <u>associated vector</u> components, as recited in
independent claim 26 and 31, are nowhere disclosed or suggested in

Nikolic, Hutchings and Jacobsen.

Rather, Nikolic merely recites to take, or allegedly 'read', values from a look-up table that includes either <u>magnitudes</u> **or** <u>vector component</u> values, but **NOT BOTH**. Further, Nikolic specifically recites **calculating** "the dynamic acceleration magnitude ... through the use of ... **equations**," as specifically recited on column 18, lines 9-11, and similarly recited on column 12, lines 43-47, which specifically recites that the "magnitude can be **calculated** through the use of the following **equations**." (Emphasis added)

Why would Nikolic **calculate** magnitudes, if such magnitudes are already stored along with associated vector components in a look-up table? The Nikolic look-up table simply does NOT store magnitudes **and** associated vector components. At best, the Nikolic look-up table stores **either** minimum (or maximum) magnitudes **or** vector component values.

On page 12, lines 4-5 of the Examiner's Answer of March 19, 2009, the Examiner correctly notes that Nikolic uses "equations" to produce a magnitude of each vector:

Nikolic's processor uses the data that has been

stored in the lookup table **and uses "equations"** to
produce a magnitude of each vector. (Emphasis added)

However, it is alleged that the same is "required by the

claims." (Examiner's Answer of March 19, 2009, page 11, line 6)

The Examiner's Answer continues to allege that:

> Nowhere is the claims are "equations" excluded.
> How the data in the lookup table is used is not
> limited by the claims. (Emphasis added)

Appellants agree that the claims do not explicitly exclude

"equations" however, strongly disagree with the further

allegations. In particular, independent claims 26 and 31

specifically recite:

> a processor configured to receive the sensor
> signals from the measurement unit, and to process the
> sensor signals as vector components of a vector to
> **produce** a magnitude of the vector **using a lookup table
> of stored magnitudes** and associated vector components.

That is, claims 26 and 31 specifically recite that the lookup

table includes **"stored magnitudes."** A lookup table that includes

"stored magnitudes," (as well as "associated vector components,")

is nowhere disclosed or suggested in Nikolic. Rather, Nikolic

calculates the magnitudes using equations and data stored in the

Nikolic lookup table. If the Nikolic lookup table included "stored

magnitudes and associated vector components," then there would be

no need to use any equations to calculate what is already in the

lookup table.   Clearly, no such magnitudes and associated vector

components are stored in the Nikolic lookup table.

Further, column 23, lines 6-8 of U.S. Patent No. 6,452,961

(Van Wechel), recited in the last paragraph of the Advisory Action

of December 11, 2007, and page 12, last paragraph of the Examiner's

Answer of March 19, 2009, merely recites that other "methods for

computing or approximating the magnitude of a vector include the

use of lookup table."   It is respectfully submitted that this

recitation of Van Wechel is completely silent about how the lookup

table is used or what is stored in the lookup table, and does not

inherently teach that the look-up table includes both "magnitudes

and associated vector components," as recited in independent claims

26 and 31.

There is no disclosure, suggestion or apparent reason in the

prior art, absent the benefit of impermissible hindsight using the

present application as a road map, for one skilled in the art to

understand that a look-up table stores both magnitudes **and**

associated vector components, as recited in independent claim 26

and 31.

Accordingly, it is respectfully submitted that independent claims 26 and 31 are allowable, and allowance thereof is respectfully requested. In addition, it is respectfully submitted that claims 27-30 and 32-35 should also be allowed at least based on their dependence from independent claims 26 and 31.

In addition, Appellants deny any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, the Appellants reserve the right to submit further arguments in support of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

CONCLUSION

Claims 26-35 are patentable over Nikolic, Hutchings and Jacobsen.

In view of the above, it is respectfully submitted that the Examiner's rejection of claims 26-35 should be reversed.

Respectfully submitted,

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